

Work Order ID 55031

January 5, 2010 1:21:24 PM



Page 1

Item ID: D3220-041
Revision ID:
Item Name: Doubler Assembly

Accept



Setup Start



Stop



Start Date: 05/01/2010 Start Qty: 8.00
Required Date: 15/01/2010 Req'd Qty: 8.00



Cust Item ID:
Customer:

Reference:

Approvals: Process Plan: 14 Date: 10-1-05 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D3220	B
-------	---

100 0.00



FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut D3220-1 as per Dwg D3220 Dwg Rev: B
Prog Rev: B

2024, OKU

2-Deburr if necessary

B 10-1-13

(12)

110 0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

B 10-1-13

120 0.00



QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

=> Siobailis

(16)

P12 ->

W/O: 55031		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/1/15	#120	Took Qty +1 For QC inspection template	S	10/01/15	+1		S 10/01/15

Part No: D 3220-041 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 55031

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Item ID: D3220-041

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Setup Start



Revision ID:

Stop



Item Name: Doubler Assembly

Start Date: 05/01/2010 Start Qty: 8.00



Cust Item ID:

Required Date: 15/01/2010 Req'd Qty: 8.00



Customer:

Reference:

Run Start



Approvals:

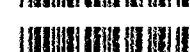
Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130



Small Fab

0.00

Small Fab

Memo

0.00

Small Fab

1-Deburr

2-C'sink D3220-1 as per Dwg D3220

Signature: [Handwritten Signature]
Date: 05/01/21
Stamp: (11X)

140



QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control

Signature: [Handwritten Signature]
Date: 10/01/25

Stamp: (X10)

150



Chemical Conversion Coat per QS1005 4.1

0.00

HandFinish

Memo

0.00

Hand Finishing

Signature: [Handwritten Signature]
Date: 10/01/25

Stamp: (X10) d

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Work Order ID 55031

January 5, 2010 1:21:24 PM



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Setup Start



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Item Name: Doubler Assembly

Start Date: 05/01/2010 Start Qty: 8.00

Cust Item ID:

Required Date: 15/01/2010 Req'd Qty: 8.00

Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

QC3- Inspect Part Finish

0.00

BR 10-01-25

(11)

QC

Memo

0.00

Quality Control

170

Small Fab

0.00

Small Fab

Memo

0.00

Small Fab

Assemble D3220-041 doubler as per Dwg D3220

EP 10/01/2011

180

QC5- Inspect part completeness to step on W/O

0.00

27 8.10.11

QC

Memo

0.00

Quality Control

(11)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Start Date: 05/01/2010 Start Qty: 8.00

Cust Item ID:

Required Date: 15/01/2010 Req'd Qty: 8.00

Customer:

Reference:

Run Start

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

Identify as per dwg & Stock Location: 177

0.00



Packaging

Memo

0.00

Packaging

10-1-27

(10x) SP

200

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/1/27

mf

10-1-27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Picklist Print

January 5, 2010 1:21:28 PM

Page 1

Work Order ID: 55031

Parent Item: D3220-041

Parent Item Name: Doubler Assembly

Comments:

Start Date: 05/01/2010

Required Date: 15/01/2010

Start Qty: 8.00

Required Qty: 8.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

M2024T3S.050

Purchased

No

100

sf

172.3533

5.8324

91



2024-T3 .050 sheet

WB 10-1-13

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

MAT

172.3532842

111381

36.3165842

112291

88.0367

113189

48

112291

MS20426AD3-3

Purchased

No

170

Each

6,251.000

64.0000



Rivet

EP 10/01/20

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

6251

1563

0

19099

4776

7681

1475

88

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

January 5, 2010 1:21:28 PM

Work Order ID: 55031



Parent Item: D3220-041



Parent Item Name: Doubler Assembly

Start Date: 05/01/2010

Required Date: 15/01/2010

Comments:

Start Qty: 8.00

Required Qty: 8.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS21059L4 Nutplate		Purchased	No			170	Each	209.0000	32.0000		1/5/10/26	

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

209

102959

4

112082

5

112243

200



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

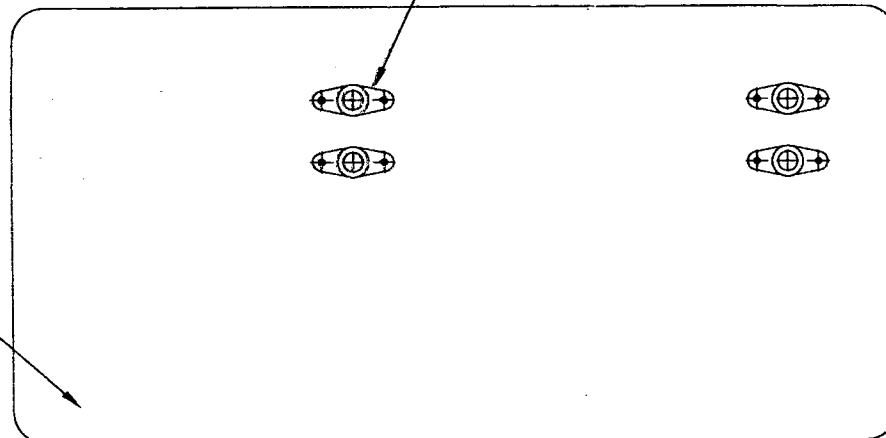
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Item	Qty -041	Qty -042	Part Number	Description
1	X		D3220-041	DOUBLER ASSEMBLY
2		X	D3220-042	DOUBLER ASSEMBLY
3	1		D3220-1	DOUBLER
4		1	D3220-2	DOUBLER
5	4	4	MS21059L4	NUTPLATE
6	8	8	MS20426AD3-3	RIVET

B
MS21059L4 NUTPLATE
MS20426AD3-3 RIVET, 2X
4 PL



D3220-1/2 DOUBLER





D3220-041 DOUBLER ASSEMBLY (SHOWN WITH D3220-1 DOUBLER)
D3220-042 (OPPOSITE)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 55031
BA 10-1-05

RELEASED
2009-09-09

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3220-04X" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: D3220-041 = 0.53 lbs
D3220-042 = 0.53 lbs

B	DRAWING UPDATED TO CURRENT STANDARDS. Ø0.316 WAS Ø0.323 (ZN C8-2, B4-3); MS20426AD3-3 WAS MS20426AD3-4 (ZN D4-1); CORRECT TYPO NOTE 1 (ZN A8-2, A8-3); REF PAR 09-025		RF	09.07.08
A	NEW ISSUE		CP	03.10.16
REV.	DESCRIPTION		BY	DATE
DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
DRAWN	RF			
CHECKED		DRAWING NO.	REV. B	
MFG. APPR.		D3220	SHEET 1 OF 4	
APPROVED		TITLE	SCALE	
DE APPR.		DOUBLER	NTS	
DATE	COPYRIGHT © 2003 BY DART AEROSPACE LTD			
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

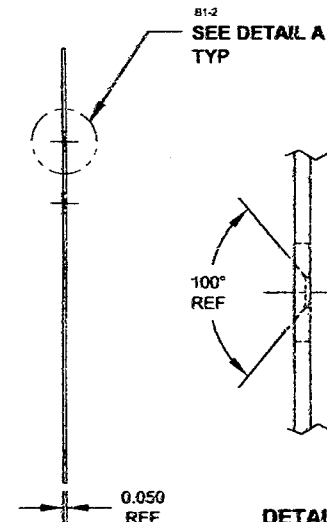
NOTE: Date & initial all entries

Ø0.098
CSK Ø0.180x100°
NEAR SIDE, 8 PL

B
Ø0.316
TYP, 4 PL

GRAIN
DIRECTION

D3220-1 DOUBLER



DETAIL A D2-2
SCALE 5X

NOTES:

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET, 0.050 THICK
REF DART SPEC. M2024T3S.050
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3220-1" USING REMOVABLE TAG
- 7) WEIGHT: 0.50 lbs

DESIGN	DS	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	GP	DRAWING NO.	REV. B
MFG. APPR.	100	D3220	SHEET 2 OF 4
APPROVED	100	TITLE	SCALE
DE APPR.	100	DOUBLER	NTS
DATE	09.07.08	<small> COPYRIGHT © 2003 BY DART AEROSPACE LTD THIS DOCUMENT IS PRELIMINARY AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. </small>	

RELEASED
2009-08-09
MD

W10 55631

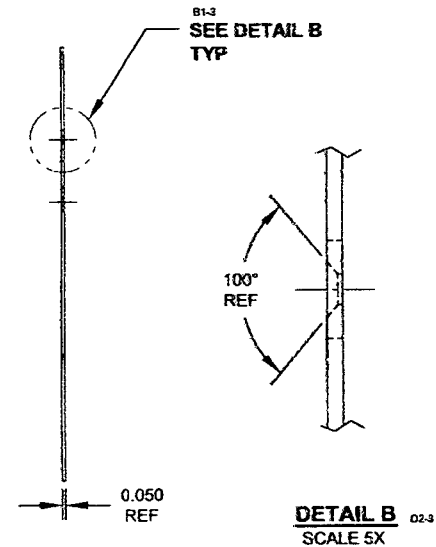
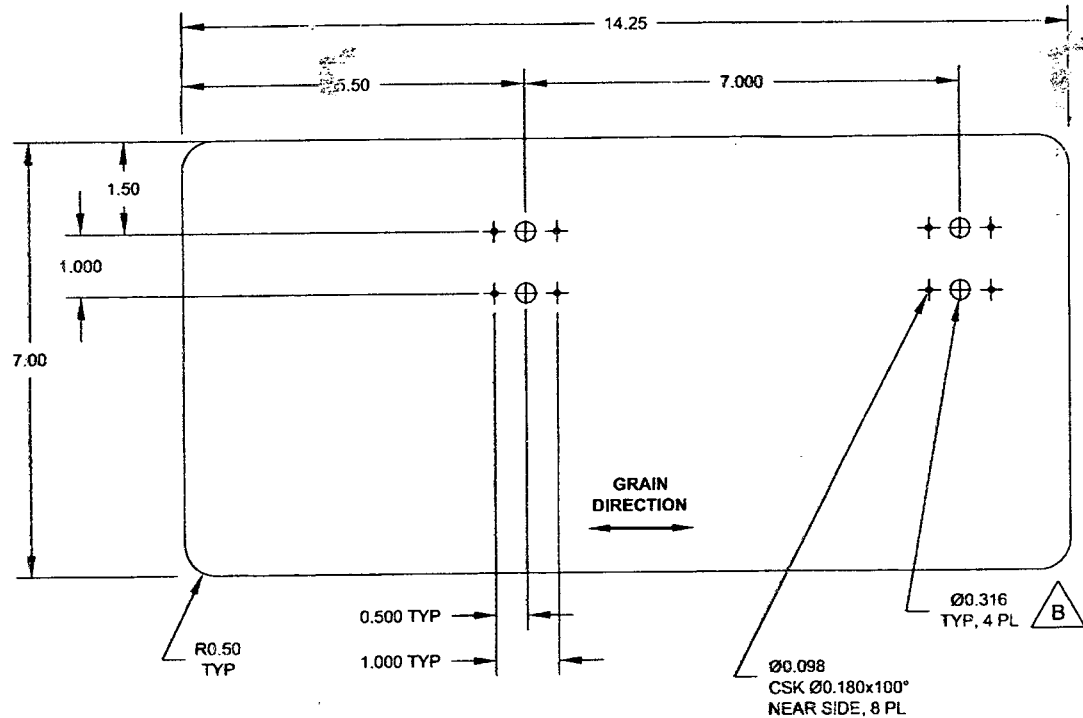
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3220-2 DOUBLER

B

NOTES:

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET, 0.050 THICK
REF DART SPEC. M2024T3S.050
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3220-2" USING REMOVABLE TAG
- 7) WEIGHT: 0.50 lbs

RELEASED
2009-09-09

DESIGN	DS	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	UP	DRAWING NO.	REV. B
MFG. APPR.	MP	D3220	SHEET 3 OF 4
APPROVED	MP	TITLE	SCALE
DE APPR.	MP	DOUBLER	NTS
DATE	09.07.08	<small>COPYRIGHT © 2003 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISSEMINATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

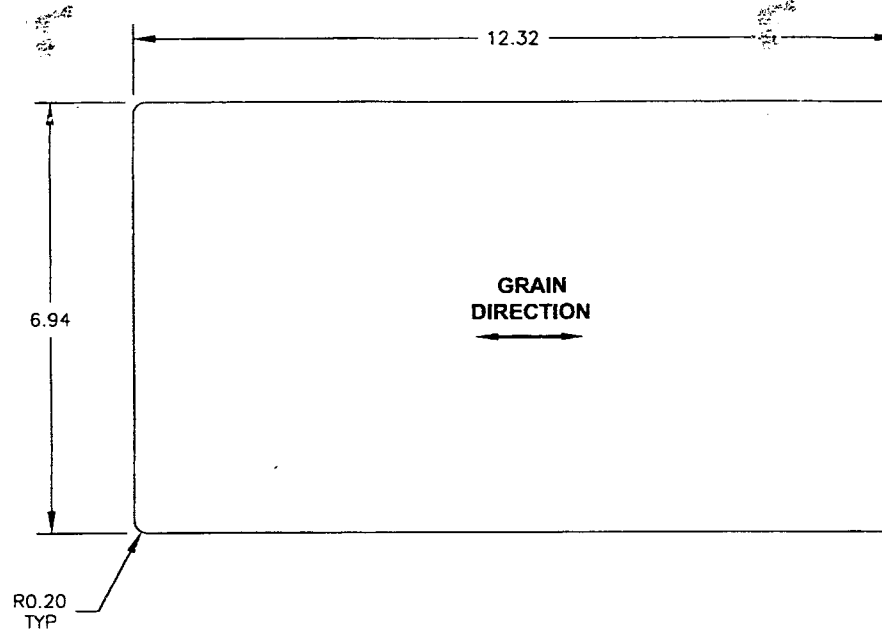
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3220-3 DOUBLER

RELEASED
2009-09-09
mt

NOTES:

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET, 0.050 THICK
REF DART SPEC. M2024T3S.050
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3220-3" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.43 lbs

W/O 35031

DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>q1</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>RF</i>	D3220	SHEET 4 OF 4
APPROVED	<i>RF</i>	TITLE	SCALE
DE APPR.	<i>RF</i>	DOUBLER	MTS
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